

APPENDIX D:

Daily Activity Log and Occupant Survey

Provided below is the top page of the activity log. Participants were asked to complete a log table for each calendar day during which measurements were being made in the home. Participants were provided with paper sheets containing a log for each day.

Healthy Efficient New California Homes Study Occupancy and Indoor Activities Data Log

Instructions: Please fill out this data log each day, or on the following day.

Please enter your best estimates. If you are unsure, please provide your best guess. Do not list the names of any people.

Code number for home _____

Day 1: Date _____

Date completed _____

	Midnight to 7am	7am to 11am	11am to 1pm	1pm to 5 pm	5pm to 9pm	9pm to Midnight
Number of people in home						
Cooktop use Number of minutes						
Oven use Number of minutes						
BBQ/outdoor grill Number of minutes						
Vacuuming Number of minutes						
Window Use Number of minutes						
Other notable* indoor/outdoor events						

* For example, use of fireplace, candle, air freshener, air cleaner, humidifier, unusual outdoor air quality (wood smoke, wildfire), and so on.

Occupant Survey

Welcome to the 2015 California New Homes Survey!

This survey is part of a research study on new homes in California. This research will help inform how new homes can provide adequate ventilation and good indoor air quality, while reducing air infiltration and energy use.

This survey takes about 15 minutes to complete. It asks questions about your home, household activities, and demographics. You can skip questions that you do not want to answer.

This research is being conducted by Lawrence Berkeley National Laboratory (LBNL) with funding from the California Energy Commission. Results will be used only for research on how to provide adequate ventilation and improve indoor air quality. In order to protect your privacy, the data will be encrypted and password protected.

Please return your completed survey in the envelope provided.

If you have questions about the research study, please contact:

Max Sherman, Ph.D.

Principal Investigator, Residential Building Systems Group

Lawrence Berkeley National Laboratory

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(510) 486 4022

Code number for home _____

Date completed _____

Please answer to the best of your knowledge. You can skip any questions that you do not want answer.

A. Home and Household Characteristics

1. What year was your house built?

Year Built:

2. What is the size (floor area) of your home?

Square Feet:

3. What year did you move into this home?

Year Moved In:

4. Do you own or rent your home?

..... Own (If yes → 5, skip otherwise)

..... Rent

..... Other

5. Are you the first owner of the property? Yes / No

6. How many people currently live in your home?

Number of People:

B. Air Quality In and Around Your Home

7. To what extent are you satisfied or dissatisfied with the indoor air quality in your home?

Very Dissatisfied					Neutral					Very Satisfied
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How would you rate the outdoor air quality near where you live?

Very Poor					Neutral					Excellent
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. How would you rate your home in protecting you from outdoor air pollution?

Very Ineffective					Neutral					Very Effective
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

C. Comfort Level in Your Home

10. In winter, how often is the temperature in your home uncomfortable to any occupants because some room(s) are too hot or too cold?

	Never	Few times a year	Few times in a month	Few times a week	Every day
Too hot in some room(s).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too cold in some room(s).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. In summer, how often is the temperature in your home uncomfortable to any occupants because some room(s) are too hot or too cold?

	Never	Few times a year	Few times a month	Few times a week	Every day
Too hot in some room(s).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too cold in some room(s).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. How often do the following conditions affect the comfort of occupants in your home?

	Never	Few times a year	Few times a month	Few times a week	Every day
Too much air movement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not enough air movement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indoor air is too dry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indoor air is too damp.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indoor air has musty odor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

D. Natural Gas Appliances and Mechanical Ventilation

13. Which of the following heating appliances are used in your home? Select all that apply.

- Central gas furnace
- Gas fireplace/ log set
- Gas wall furnace
- Freestanding gas heater
- Central electric heating or heat-pump
- Baseboard electric wall heater
- Freestanding electric heater
- Wood fireplace
- Freestanding propane heater
- Freestanding kerosene heater
- Other. Please describe:
- Don't know

14. How often is the kitchen range hood or kitchen exhaust fan used when cooking with a cooktop?

- Always (5 out of 5 times)
- Most of the Time (4 out of 5 times)
- Sometimes (2 to 3 out of 5 times)
- Rarely (1 out of 5 times)
- Never (0 out of 5 times)
- Don't know

15. If the kitchen range hood or kitchen exhaust fan is NOT always used, what are the reasons for not using it? Select all that apply.

- Forget to turn it on
- Not needed for what is being cooked
- Too noisy
- Doesn't seem to remove cooking fumes or odors
- Open window instead
- Uses too much energy
- Other. Please describe:

16. Was the operation of the mechanical ventilation system explained to you when you bought or moved into the home?

..... Yes

..... No

..... Don't know

17. Do you feel you understand how to operate your mechanical ventilation system properly?

..... Yes

..... No

..... Not Sure

18. To what extent are you satisfied or dissatisfied with your mechanical ventilation system?

Very Dissatisfied					Neutral					Very Satisfied
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. If you are NOT very satisfied with your mechanical ventilation system, what are the reason(s) for dissatisfaction? Select all that apply.

..... Too noisy

..... Too drafty

..... Difficult to operate

..... Difficult to maintain

..... Uses too much energy

..... Brings in dust, odor, or air pollutants from outdoor

..... Not effective

..... Other. Please describe:

E. Occupancy and Indoor Activities

20. On average, how many hours per day is your home occupied by at least one person, including day and night hours?

	Fewer than 8 hours per day	8 to 12 hours per day	12 to 16 hours per day	16 to 20 hours per day	More than 20 hours per day
Weekday	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weekend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. On average, how many times per week is your cooktop and/or oven used for cooking, including boiling water?

	0 time per week	1 to 2 times per week	3 to 4 times per week	5 to 6 times per week	7 times per week
Breakfast	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lunch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dinner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other cooking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. On average, how many times per week do the following activities occur inside your home?
Enter "0" if occurrence is less frequent than once a week.

Use shower (Times per week)

Use bath or indoor Jacuzzi (Times per week)

Use dishwasher (Times per week)

Use washing machine (Loads per week)

Hang clothes to dry indoors (Loads per week)

F. Window Opening

23. On average, how many hours per day are your windows open?

	0 hour per day	1 to 2 hour per day	2 to 8 hours per day	8 to 16 hours per day	More than 16 hours per day
Summer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Winter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spring	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

G. Indoor Activities

24. On average, how often do the following activities occur inside your home?

	Never	Few times a year	Few times a month	Few times a week	Every day
Smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Burn candle or incense	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Vacuuming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use cleaning agent for floor cleaning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use spray air freshener	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use pesticide spray	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use paints, glue, solvents (e.g., hobbies, home repairs)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use humidifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Use dehumidifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

H. Other Indoor Sources

25. Are plug-in or stick air fresheners, or other scented decorations, used in your home?

..... Yes

..... No

..... Don't know

26. Do occupants wear shoes in your home?

..... Yes

..... No

..... Don't know

27. How many dogs, cats, or other furry pets are in the home?

Number of Pets:

I. Use of Air Cleaners

28. Do you use a stand-alone (portable) air filter, air purifier, or air cleaner in the home?

..... Yes

..... No

..... Don't know

29. Where is your stand-alone (portable) air filter, air purifier, or air cleaner located in your home? Select all that apply.

..... Master bedroom

..... Other bedroom(s)

..... Living room

..... Home office

..... Other. Please describe:

30. Has anyone in the household been diagnosed with asthma?

..... Yes

..... No

..... Don't know

31. Has anyone in the household been diagnosed with allergies?

..... Yes

..... No

..... Don't know

J. Demographic Information

The next questions will help us interpret the results of the survey. All responses will be kept confidential.

32. Please indicate the number of household member(s) in the following age categories.

	Number of household member(s)
0 to 17 Years old
18 to 65 Years old
Over 65 Years old

33. What is the highest education level of head of household?

- No schooling completed
- 1 to 8th grade
- 9th to 12th grade
- Completed high school (high school diploma, GED credential)
- Some college
- Associate's degree
- College degree (Bachelor's degree)
- Graduate degree (Master's, Professional school, Doctorate degree)

34. Please indicate all races and/or ethnicities of people living in your household.

- American Indian, Alaska Native
- Asian or Pacific Islander
- Black, African American
- Hispanic/ Latino
- White, Caucasian
- Other, specify:
- Mixed race, specify:

35. What is the total income of all member(s) of your household combined?

-Less than \$35,000
-\$35,000 to \$ 49,999
-\$50,000 to \$ 74,999
-\$75,000 to \$ 99,999
-\$100,000 to \$150,000
-Greater than \$150,000

K. End of Survey

Thank you for filling out this survey! Your data is very valuable to our understanding of indoor air quality and mechanical ventilation in new California homes.

Please return your completed survey in the envelope provided.

If you have any questions about the survey, please contact:

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For more information about the results of this survey, please visit our website:
<http://hengh.lbl.gov/>